

REMARKS

Claims 11-15 are all the claims pending in the present application. Claims 11-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,138,102 to Palmer ("Palmer") in view of U.S. Patent No. 5,145,170 to Morita ("Morita"), or over U.S. Patent No. 5,335,046 to Bosy ("Bosy") in view of Morita.

AMENDMENTS TO THE CLAIMS

Claims 11 and 15 are amended herein.

OBJECTION TO CLAIM 15

As shown above, Applicant has amended claim 15. Applicant submits that the amendments to claim 15 overcome the Examiner's objection.

CLAIM REJECTIONS

In general terms, the present invention relates to a drum on which is disposed a printing plate. One embodiment consistent with the claimed invention is illustrated in FIG. 5. The drum 54 has a shaft 200 on which is disposed a plurality of cylindrical supports 210 that are co-axial with the shaft 200. The cylindrical supports 210 are spaced such that the interval between cylindrical supports 210 is less than the width of one cylindrical support 210. A printing plate is disposed on drum 54 and is attached to the drum 54 by a series of chucks 74, 62 (see FIGS. 3-4).

A. The Examiner Has Not Asserted A Credible Motivation To Combine The References

As an initial matter, the Examiner asserts as the motivation to combine the Palmer and Bosy references with the Morita reference is a reduction in the cost of manufacturing a drum as suggested in Morita at col. 3, lines 27-30. The cited portion of Morita states that it is an object of Morita's teachings "to provide a rotary drum capable of being manufactured from [a] simple and

reduced number of manufacturing processes” and having reduced costs. This statement is based on problems associated with one-piece drums existing in the prior art used in a system that employs vacuum pressure to hold a plate or film to a drum. *See* col. 1, line 58 - col. 2, line 19. For example, drum 170 shown in FIG. 12 would require several machining operations to place holes 174 in drum 170. Therefore, it becomes apparent that while Morita may suggest that a multiple-piece drum is easier and less expensive to manufacture than a one-piece drum when the drum must have several machining operations performed on it after its manufacture, it does not stand for the proposition that a multi-piece structure is more economical and easier to manufacture than a drum such as that disclosed in Bosy. Thus, Morita would not motivate one of ordinary skill in the art to modify the Bosy reference according to the teachings of Morita.

Further, there is no reason to believe that adding the structure of Morita to the Palmer reference would result in a more economical or less complicated manufacturing process. Palmer’s cylindrical drum (*see* FIGS. 2-3) would be as easy and inexpensive to manufacture as the structure disclosed in Morita, if not more so. Therefore, while the Examiner has asserted a motivation, the motivation is not credible as the combination of references would not achieve the result that is the basis of the motivation, i.e., a cheaper and easier manufacturing process.

Further still, combining Bosy and Morita is likely to result in a more complicated and expensive drum. The clamps taught in Bosy have significant structure existing on the interior of the drum 10 and extending through the axis of rotation of the drum 10. For example, FIGS. 2B and 3 show that weight 32 extends beyond the axis of rotation of drum 10. Implementing such a clamp structure as disclosed in Bosy would be both complicated and costly as the Morita

structure would require considerable structural modifications to allow for Bosy's clamp 2 to extend past the axis of rotation due to interference with the central shaft 18 required in Morita. Bosy teaches that the weight is positioned beyond the axis of rotation so that as the drum 10 rotates, the weight increases the clamping force on a plate 16. Therefore, one of ordinary skill in the art would not relocate weight 32. Thus, one of ordinary skill in the art would not be motivated to combine Bosy and Morita.

Accordingly, Applicant submits that the Examiner's 35 U.S.C. § 103(a) rejections must fail for this reason alone.

B. The References, Even If Combined, Do Not Teach Or Suggest A Drum As Disclosed In Claims 11-15

Assuming that the Bosy and Palmer each disclose structure as recited in the Examiner's rejection, the combination of the Bosy and Palmer references with Morita fails to teach or suggest each element of claims 11-15.

The Examiner asserts that Morita teaches a skeletal structure having a plurality of wide cylindrical supports separated by an interval narrower than the cylindrical supports. The Examiner points to FIG. 1 in support of this position. However, as Morita's Brief Description of the Drawings makes clear, FIG. 1 is an exploded view of the drum 10 disclosed in Morita. Col. 5, lines 10-12. Morita's drum 10 is used to hold a film onto the drum 10. To do this, a vacuum is created inside the drum, thereby holding the film onto the drum by the force of the vacuum acting on the film through the slots in drum. This would not work if the intermediate members 22 and 24 were spaced as required by claim 11. Further, the specification of Morita makes it clear that the intermediate members 22 and 24 are *not* spaced apart. See col. 7, lines 27-30


(“...when each of the members [22 and 24] are secured to the central shaft 18 so that they are brought into close contact with and integrated with one another, the space between [sic] the intermediate member 22 and the intermediate members 24 are connected to each other.”). Thus, Morita does not teach or suggest spacing cylindrical supports at any interval. As discussed in the specification, a drum consistent with the present invention is different than a drum with a plurality of pieces joined together to form a conventional drum as taught in Morita. Specification at page 25, third paragraph. Palmer and Bosy fail to cure this deficiency. Accordingly, Applicant submits that claims 11-15 are patentable over Palmer or Bosy even if somehow combined with Morita.

CONCLUSION

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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